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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Activities Report
of the Air Quality Bureau

August, 1977

STATE DOCUMENTS

1. Highlights

Continued to work on the MAPS Project. The Consultants from GCA were taken on a tour of the Butte-Anaconda area.

The Air Pollution Advisory Council met to consider the proposed ambient rule changes which are to be heard at the November Board meeting.

2. Ambient Air Quality Network

a. Standards Exceeded:

SO₂ violations - From Company stations near Anaconda Smelter:

State 1-hour	198
State 24-hour	29
Federal 24-hour	16
Federal 3-hour	15

	Microwave	Saddle Mtn.	East Station	Cogswell
State 1-hour	4	*	0	*
State 24-hour	0	*	0	*
Federal 24-hour	0	*	0	*
Federal 3-hour	0	*	0	*

*No data - analyzers being relocated

	Post Office	Mill Creek	C-Hill	Hwy Junction
1-hr. excur.	16	3	34	22
Highest 1 hr.	0.68	0.32	3.20	0.93
Highest 24-hr.	2.63	0.62	4.35	4.00
Highest 3-hr.	1.41	0.50	4.26	2.17
No. over Fed. 3-hr.	7	1	16	11

Alpine West

CO violations
Highest 1-hr.

0.20 ppm

NO₂ violations
Highest 1-hr.

0.05 ppm

O₃ violations
Highest 1-hr.

0.140 ppm

b. Air Stagnation Advisories - None in August

c. Laboratory Status:

Samples for Month	351
Total determinations for month	351

c. Developments:

Part-time Lab Aide hired for the summer terminated in August. A replacement has been hired to fill the position.

3. Permits and Tax Credits

a. Construction Permits Applied for:

Pipe Creek Lumber, Libby, tepee burner
Peter Kiewit Sons' Co., Lincoln County, hot mix plant
Harding's Ready Mix Concrete, Lake County, gravel crusher, hot mix plant
Baltrusch Construction Co., Powell County, hot mix plant
Central Montana Hospital, Lewistown, incinerator
Riverside Logging Company, Roundup, burning apparatus
Gus M. Albert, Roosevelt County, gravel crusher
Gus M. Albert, Roosevelt County, hot mix plant
Gus M. Albert, Roosevelt County, gravel crusher
Maronick Construction, Jefferson County, gravel crusher
Wickens Brothers, Treasure County, gravel crusher
Meyer Construction Company, Wibaux County, gravel crusher
Meyer Construction Company, Richland County, gravel crusher
Spring Creek Coal Company, Decker, Crushers, conveyors, coal storage and train loading systems
Portable Pavers, Inc., Dawson County, hot mix plant
Texaco, Inc., Hill County, gas treating facility for natural gas
Francis Tindall Construction, Fergus County, gravel crusher
Super Save Market, Helena, incinerator
Pack and Company, Flathead County, hot mix plant

Construction Permits Approved:

Federal Bentonite, Valley County, bentonite drying plant
Spring Creek Forest Products, Judith Gap, tepee burner
Earth Builders, Inc., Carter County, gravel crusher
Earth Builders, Inc., Daniels County, hot mix plant
Earth Builders, Inc., Carter County, hot mix plant
J-B Company, Sheridan, equipment for milling and leaching of metals ore
Maronick Construction Company, Jefferson County, gravel crusher

c. Tax Credits: None

4. Variance Status

a. Current:

The SO₂ variance for the Anaconda Company was renewed at the January 21 Board meeting. It expires on June 30, 1977. A request for renewal has been received. The hearing is scheduled for the November Board meeting.

Anaconda's application for a variance from the visibility rule for the smelter has been scheduled for the November Board meeting.

ASARCO, Inc., variance request is still pending. It will probably be heard at the September 30 Board meeting.

4. Variance Status, Cont.

Anaconda Aluminum, Columbia Falls, F⁻ and particulate, expires June 30, 1978.

b. New - None

5. Enforcement Actions:

a. Citations

ASARCO, Inc., East Helena, 770823-HK-1 to 770823-HK-10 for 3 hour and 24 hour federal ambient air standards for sulfur dioxide.

Maronick Construction, Montana City, 770811-BR-1, crusher, violation of rule 16-2.14(1)-S1440, particulate matter, airborne.

McIntyre Construction, Bernice, 770816-BR-1, crusher, violation of rule 16-2.14(1)-S1440, particulate matter, airborne.

Zook Brothers Construction, Anaconda, 770824-BR-1, asphalt plant, violation of rule 16-2.14(1)-S1460, visible air contaminants, restrictions.

Meyer Construction, Billings, 770801-HK-1, batch plant in violation of rule 16-2.14(1)-S1460, visible air contaminants.

b. Notice of Violation

Rite-Way Asphalt, Butte, N770803-BR-1, batch plant in violation of rule 16-2.14(1)-S1460, visible air contaminants, restrictions.

Meyer Construction, Billings, N770829-HK-1, batch plant in violation of rule 16-2.14(1)-S1430, particulate matter, industrial processes.

c. Order for Corrective Action

Rite-Way Asphalt, Butte, 0770803-BR-1, batch plant in violation of rule 16-2.14(1)-S1460, visible air contaminants, restrictions.

- Order:
- a. Submit plan, 9/6/77
 - b. Issue purchase order, 11/1/77
 - c. Operate at reduced loads until 12/30/77
 - d. Submit testing schedule 3/1/78
 - e. Final compliance, 5/1/78

Meyer Construction, Billings, 0770829-HK-1, batch plant in violation of rule 16-2.14(1)-S1430, particulate matter, industrial processes

Order: Final compliance, 10/15/77

Order Bandor Oil of Denver, Colorado, to flare well H₂S gases at a well near Sidney.

d. Court Actions - None in August

6. Tepee Burner and Open Burning

Tepee Burner Inventory:	No. at start	39
	New starts	0
	Shutdowns	0
	No. at end	39

Permits Issued:

Cascade County	3	Sanders County	27
Flathead County	16	Yellowstone County	20
Lake County	3	Rest of State	233
Missoula County	1	Total	303

7. Source Tests Performed

a. Agency Source Tests:

Billings, Conoco, FCC was tested for particulates and particle size

Meyer Construction, asphalt batch plant was tested by YS&B (now EERC) at Hardin

Colstrip monitor performance tests are continuing

b. Non-agency Tests :

Hoerner-Waldorf, Missoula, 13 particulate tests on recovery boilers, lime kilns, slakers, smelt tanks and hogged fuel boiler

8. Field Investigations

Continental Oil, Billings, odor complaint, H₂S from stripper suspected
Meyer Construction, McDonald Pass, portable hot mix plant, Citation issued for excessive visible emissions
ASARCO, Inc., East Helena, inspection to determine status of construction
Brand S, Burkland Studs, Willow Creek, Park Lumber, tepee burners, Livingston, inspection, in compliance
Gilman Excavating, inspection during source test, in compliance
Meyer Construction, McDonald Pass, observation, non-compliance
Harding's Ready-Mix, proposed crusher, Pablo, no action
Amish Colony, West Kootenai, open pit incinerator, conference, problem corrected
C & C Plywood, Kalispell, fuel cell for dryers 2 and 3, planning conference
Harding Ready-Mix, Pablo, inspection, action pending
Meyer Construction, Kalispell, inspection, in compliance
Rite-Way Asphalt, Butte, follow-up inspection, NOV issued
St. James Hospital, Butte, incinerator, short-term excessive emissions
Maronick Construction, Montana City, crusher, response to complaint, Citation issued
McIntyre Construction, Bernice, crusher, response to verbal complaint, Citation issued
Zook Brothers Construction, Anaconda, asphalt plant, response to complaint by staff member, Citation issued.

9. Complaints

D & T Fiberglass, Billings, organic odor, under local control
Maronick Construction, Montana City, silica dust, under investigation
Big Timber Landfill, Big Timber, open burning, under investigation
Colorado Gulch Road, Helena, road dust, under investigation
Anaconda Company Smelter, Anaconda, smoke, under investigation
Willow Creek Lumber, Livingston, soot and sawdust, under investigation
Maronick Construction, Montana City, crusher, investigation and citation
C & C Plywood, Kalispell, fly ash, investigation
Harding Ready-Mix, Pablo, crusher working, investigation

10. Data Processing Services

- a. Ambient Data Summary - See attached
- b. Emission Inventory Status - No updates were received
- c. Prevention of Significant Deterioration

Review of Clean Air Act Amendments of 1977

- d. Modeling

A rough draft of Billings AQMA modeling analysis was written, incorporating comments by affected industries.

A modeling analysis was also initiated on Missoula AQMA through the use of a multiple box model.

11. Environmental Impact Statements

- a. Agency Impact Determinations:

A joint impact statement, written with Department of State Lands, will be considered as final. No comments were received by the AQB.

12. Status of Studies, Contracts and Reports

Columbia Falls Study - Trip was made to Kalispell to install a new minisonde receiver and test it.

Troy Study - installed two wind instrument towers.

Trip made to Anaconda to tour smelter and data acquisition system.

Billings SO₂ negotiations - Unlikely that Stipulations will be agreeable to refineries and EPA in SIP revision.

SE Coal - TSP input from workshop in Billings

Butte TSP - PEDCo analysis continues.

MAPS - Health study advisory committee meeting for Air Monitoring Committee. Discussed site location and parameter specification for Missoula, Billings, Butte and Anaconda.

Special particulate study of coal companies - Designed and had printed special forms to be filled out by coal companies concerning their results of hi-vol and dustfall data. The form is designed for data processing ease.

12. Status of Studies, cont.

Rockwell International has responded to our contract proposal to evaluate Anaconda's in-stack instruments. Their reply was received on July 18. Contract will be finalized in September.
Report to Board on Anaconda Aluminum's request to shut down foam scrubber in process.

13. Schools and Training

None in August

14. Public Hearings and Meetings

A. Public Hearings Held:

S.E. Montana Coal Area, Billings
Meetings with Billings Industries, Interested Public concerning proposed rule changes.

b. Meetings Attended

Billings AQMA, Helena
Department of State Lands, Helena, coal mining effect on air quality
Subdivision review for Billings, in Helena
Billings Transportation planners, in Billings
Montana Coal Council, Billings
Missoula Air Quality Control Office, PEDCo, in Helena
Met with GCA concerning MAPS, in Helena
Billings industries on ambient rule changes, Helena and Billings
Air Pollution Advisory Council, Helena, proposed rule changes
Emission Inventory Advisory Committee, MAPS, Helena
State Air Shed Meeting, Missoula
U. S. Forest Service, fire personnel, Missoula
State Division of Forestry, fire personnel, Missoula
State Employees Orientation Program, Helena
Sierra Institute Corporation, Helena, demonstrating air sampling equipment
EPA, proposed rule changes, Helena
Solid Waste State Plan, Missoula

c. Intra-staff Meetings

Proposed rule changes, Helena
MAPS project, Helena

15. Public Information Requests

Rules and Regulations	- 9
Clean Air Act	- 1
General Information	- 1

16. N.A.

17. Other

Francis Mahon Deaconess Hospital in Glasgow has been requested twice to submit a construction permit application for their incinerator (9/30/76 and 5/24/77). No response has been received. If installation of the incinerator can be verified, a citation will be issued.

Met with plant ecologist for GNP and discussed possibility of doing more extensive studies to determine if present sites are the best for collection of fluoride emissions. The U. S. Park Service and U. S. Forest Service are possibly going to press charges for damages that have occurred to plant life from fluoride emissions.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

July 1977

Pollutant: TSP		Units: ug/m ³ meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date No. of Days of Data	Comments
140	Norton Res. Big Horn Co. Warren Ranch Big Horn Co. Lockwood School Billings NDM Billings City Hall Billings Grand Ave. Sch. Billings Laurel Jr. High Laurel	97 103	148 103	162 103	47.6 23.7	7 7

141	Hospital Roof Great Falls Fire Sta. #1 Great Falls 10th Ave. S. Great Falls	102 75	225 869	225 869	47.6 75.4	7 7
142	Hwy Jct. Anaconda McKinley Res. Granite Co. Silver Bow Gen. Butte Creeley School Butte Atkins Res. Walkerville Richer Res. Sil. Bow. Co.	161 36 49 39 65 52	161 121 90 210 226 130	161 250 94 210 226 130	111.9 43.4 39.3 69.9 86.3 47.3	1 7 7 7 7 7
				46	27.7	7

Pollutant: TSP		Units: ug/cu meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date No. of Days of Data	Comments
142	Wilson Constr. Butte Microwave Jefferson Co. 212 East Pacific Lewin & Clark Co. Tierney Pies. Silver Bow Co. Ekalaka Carter Co. Littlefield Hill Miles City Glendive Dawson Co. Lane Deer Rosedale Co. Pt. Peck McCone Co. Broadus Powder River Co. NN Site Colstrip McRae Site Colstrip High School Col. Falls Court House Missoula JB Field Missoula Frenchtown Missoula Co.	174 38 92 40 80 45 41 25 43 45 40	174 103 149 64 335 45 102 243 91 275 93	174 103 187 64 335 45 102 243 91 275 93	49.8 26.2 67.8 35.7 83.3 17.8 27.0 38.6 32.8 27.6 36.2	3 7 7 7 7 7 7 6 7 7 7
144				***		
		260	260	294	110.0	7
		198	295	342	95.3	7
		92	140	214	50.8	7
		84	255	255	47.2	7

*** data unavailable at time of report

Pollutant: TSP		Units: ug/cu meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date No. of Days of Data	Comments
144	Kalispell-Sher. Flathead Co. Troy Lincoln Co.	98 56	226 122	226 122	90.2 44.8	7 5

Pollutant: Misc. Cont. Data		Units:				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date No. of Days of Data	Comments
140	Carbon Monoxide 27th & Montana Billings			***		
144	Malfunction Jct. Missoula	17.20	17.5	17.5	4.903	6
142	Alpine West Butte Hydrocarbons	1.00	3.70	3.70	0.551	2
140	27th & Montana Billings NN Site Colstrip Meth-Hydrocarbons NN Site Colstrip Sma Meth-HC NN Site Colstrip Nitric Oxide NN Site Colstrip Nitrogen Dioxide			***		
143				***		
143				***		
143				***		
143		0.10	0.10	0.10	0.043	2
140				***		
143		0.13	0.13	0.13	0.030	6
142		0.03	0.08	0.08	0.015	2

*** Site no longer sampling

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

July 1977

Page 2 of 3

Pollutant: Misc. Cont. Data

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days	
143	Division of Mt. BN Site Colstrip	0.12	0.12	0.12	0.061	2	
140	7th & Montana Billings			***			
143	BN Site Colstrip			***			
140	7th & Montana Billings			***			
142	Laurel Farm Billings			***			
142	E. Helena	0.02	0.44	0.44	0.012	7	
	Microwave	0.63	1.40	1.40	0.010	7	1 excur Mt. Lhr.
	Saddle Mtn. E. Helena	0.06	0.78	0.78	0.012	7	
	Cogswell Bldg. Helena	0.08	0.40	0.40	0.006	7	
	C-Hill Anaconda	0.0	3.51	3.51	0.019	7	
	Hi-way Jet. Anaconda	0.0	1.46	1.33	0.023	7	
	Mill Creek Anaconda	0.0	0.88	1.36	0.018	7	
	Post Office Anaconda	0.0	1.05	1.05	0.010	7	
142	BN Site Colstrip	0.0	0.0	0.0	0.0	7	

*** data unavailable at time of report

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days	
142	Fluoride Plates Millenburgh	mg/m ³	cm/30 days				
	Powell Co.						
	Johnson's						
	Powell Co.						
	N. Ac. Hwy. Powell Co.						
	Ramsay West						
	Sil. Bow Co.						
	ESE Stauffer						
	Sil. Bow Co.						
143	BN Site Colstrip						
144	Dehlborns Mt. Box	0.890	1.610	1.710	0.747	6	
	Flathead Co.						
	Anaconda South	2.600	7.550	7.740	3.443	6	
	Flathead Co.						
	Glac. Nat. Pk. 1	0.640	0.640	0.640	0.338	6	
	Glac. Nat. Pk. 2	0.580	0.580	0.580	0.427	6	
	Glac. Nat. Pk.						

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days	
142	Fluoride Plates	mg/m ³	cm/30 days				
	Dinant Canyon						
	Deer Lodge Co.						
	N. Ac. Hwy						
	Powell Co.						
	NW on Hill						
	Powell Co.						
	Ramsay West						
	Sil. Bow Co.						
	ESE Stauffer						
	Sil. Bow Co.						
143	BN Site Colstrip						
144	Teakettle #6						
	Flathead Co.						
	Anaconda South	3.560	8.530	8.820	4.385	6	
	Flathead Co.						
	Glac. Nat. Pk. 1						
	Glac. Nat. Pk. 2						
	Glac. Nat. Pk. 3						
	Glac Nat Pk.	0.170	0.170	0.180	0.146	7	

* no data from this site for this month

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days	
141	Dustfall - Tons/eq. ml						
	Mountain States	10.29	48.15	48.15	24.22	7	
	Great Falls						
	Fire Sta. #1	10.19	23.75	25.93	17.20	6	
	Foregrounds						
	Great Falls	23.45	31.46	31.46	15.19	7	
140	Sulfation Rate - mg O ₃ /100 sq. cm						
	3/8 mi NE Coop	1.350	4.380	4.800	2.473	6	
	Billings						
	East of Laurel	0.980	3.220	3.220	1.822	6	
	Billings	0.850	1.840	1.840	1.138	6	
141	Stock Car Track	0.002	0.607	0.607	0.289	6	
	PHILLIPS Ref. M1	0.422	0.629	0.629	0.432	5	
	Great Falls						
	Phillips Ref. E	0.560	0.575	0.575	0.348	7	
142	Microwave						
	E. Helena						
	Hi-way Jet.						
	Anaconda						
	C-Hill						
143	Anaconda BG Site						
	Colstrip						

*** - data unavailable at time of report

** - site no longer sampling

July 1977

Pollutant: Misc. Bubbler Data

Units: num

AREA		RICH MONITORING			ARITHMETIC AVER.		Comments Etc.
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Cont. At	
140	Sulfur Dioxide Lockwood School Billings 3/8 mi NE Coop Billings			---			
143	Scobey Daniels Co. Ft. Peck McCona Co. Lame Deer Rosebud Co. BN Site Colstrip	0.0	0.0	0.0	0.0	7	
	<u>Nitrogen Dioxide</u>	0.0	0.0	0.0	0.0	7	
143	Scobey Daniels Co. Ft. Peck McCona Co. Lame Deer Rosebud Co. BN Site Colstrip	0.0	0.0	0.0	0.0	7	

Pollutant :

Table 3.1

AREA		HIGH READING			ARITHMETIC AVER.		
A/C#	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Hrs. of Data	Comments

Pollutants:

Units

AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Yrs. of Data	Comments

Pollutants:

Units:

ANVA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mont. of Data	Comments

